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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,438	12/27/2001	John D. Maxfield	5253-05201	1506

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WONG, CABELLO, LUTSCH, RUTHERFORD & BRUCCULERI,
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HOUSTON, TX 77070

EXAMINER

BLACK, LINH

ART UNIT PAPER NUMBER

2177

DATE MAILED: 04/22/2004

H

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Applicati n No.

10/034,438

Applicant(s)

MAXFIELD, JOHN D.

Examiner

LINH BLACK

Art Unit

2177

-- The MAILING DATE of this communication appears n th cover sheet with the corresp ndence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 10-17 is/are rejected.
- 7) ☒ Claim(s) 6-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.84(o) because they fail to show necessary textual labels of features in Figs. 2, 3a, and 3b as described in the specification. For example, placing the label, "the computer system" with element 82 of figure 2, "a DB2 object definition" with element 300 of figure 3a, or "a Free Space Manager object definition" with element 350 of fig. 3b would give viewers a clear understanding of the drawing. A descriptive textual label for each numbered element in these figures would be needed to fully and better understand these figures without any substantial analysis of the detailed specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

Specification

2. The use of the trademark "DB2" on page 2, "OS/390" and "Z/OS" on page 6 etc... has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might

adversely affect their validity as trademarks. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification .

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 10-17 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are:

As per independent claim 10, Applicant claims the method of monitoring growth within a database in the preamble. However, in the body of the claim, there is no actual step that does the monitoring. Claims 11-17 further incorporate claim 1 are also rejected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Iyer et al.

(USP 6411964).

5. Iyer et al. anticipated the independent claim 1 by the following:

“creating a data structure” – col. 14, lines 16-32; col. 21, lines 38-39; col. 22, lines 38-66.

“wherein said data structure comprises key ranges of a plurality of database tables and indexes” – col. 4, lines 5-31; col. 6, lines 6-63; col. 12, lines 8-24; col. 22, lines 38-66.

“free space parameters **associated** with said key ranges” – col. 6, lines 6-63; col. 7, lines 11-36; fig. 11, element 1126; col. 17, lines 49-60.

“redistributing rows within a plurality of page sets of the plurality of database tables and indexes” – col. 4, lines 17-31; col. 6, lines 37-62; col. 10, lines 15-63.

“wherein said redistributing **references the key ranges** of the data structure and the **free space parameters** associated with said key ranges” - col. 6, lines 6-63; col. 7, lines 11-36; fig. 11, element 1126; col. 17, lines 49-60 (in which Desired Page D_P is calculated based on the size of R, page size, desired frequency of free pages, desired percent of free space per page, etc. , and the procedure CLUSTER_RECORD being called with the RID of R and D_P as its parameters); col. 22, lines 41-66 (wherein a

user has a position (key value) in a key range of the index or relevant subset of the index 110 is scanned; creating DL 800 structures (indices 802 etc.); Correct the composite RID list according to the composite DL 800.

6. Iyer et al. anticipated claim 2 by the following:

“wherein the plurality of page sets comprise one or more of: a file page set, or an index page set” – col. 6, lines 16-62.

3. Iyer et al. anticipated claim 3 by the following:

tables and indices may be comprised of a plurality of partitions – col. 4, lines 5-21; fig. 1, elements 108, 110; The DBMS 106 divides the storage of an index 110 into units called index pages, which the DBMS arranges in a hierarchy; highest key, lowest key – col. 6, lines 26-36; The DBMS 106 divides the table 108 space (and the clustering index 110) into partitions according to values of the indexed key – col. 6, lines 46-52. Within each partition's key range, there are low key and high key – fig. 1, element 110; col. 22, lines 42-44.

4. Iyer et al. anticipated claim 4 by the following:

wherein the free space parameters associated with said key ranges **comprise** one or more of: a free page value, a free pages value, a percent free value, an end of key range number of free pages value, or a maximum number of rows value for each of the

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plurality of database tables and indexes – col. 6, lines 26-36; col. 17, lines 49-52; col. 22, lines 41-66.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iyer et al. (USP 6411964), and further in view of Woodhill et al. (USP 5649196).
8. As per claim 5, Iyer et al. does not explicitly suggest: “wherein the free space parameters associated with said key ranges are user specified. Woodhill et al. (USP 5649196) teach: “system and method for distributed storage management on networked computer systems using binary object identifiers” – the title. Woodhill et al. teach the amount of required free space is user specified – col. 12, lines 38-53. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to allow user to specify the free space parameters in order to better control data storages by specifying or projecting the future growth of data space into the free space parameters.

Allowabl Subject Matter

Claims 6-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINH BLACK whose telephone number is 703-305-0317. The examiner can normally be reached on Monday-Thursday from 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN BREENE can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306, for Before Final communications: 703-746-7239, and for After Final communications: 703-746-7238.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-746-7240.

LINH BLACK

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Patent Examiner

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LINH BLACK


GRETA ROBINSON
PRIMARY EXAMINER

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Patent Examiner

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